very good reasons for why we would want to give underrepresented minorities a leg up in college admissions," she explained. "In a sort of legal framework, it fosters a diverse learning environment. If people are really going to be educated, they have to have exposure to different perspectives, so you need a quorum of underrepresented minorities on campus." College admissions, she said, is fundamentally an "unfair" process that reflects the realities of inequality in the country, and race-conscious admissions policies are "one small mechanism" to address racial inequality. "It is very hard," Warikoo added, "to come up with something race-neutral that addresses race."

The SFFA case is scheduled to go to trial in October. The University, signifying the importance it assigns to the issues, accompanied its June 15 filings with a website summarizing its side of the case and providing supporting materials: https://projects.iq.harvard.edu/diverse-education. For more complete reports, see harvardmag. com/admissionsdocs-18 and harvardmag. com/sffa-filing-18. ~BRANDON J. DIXON

# Thinking about Space

IN A SEMINAR ROOM on the fifth floor of the Graduate School of Design's Gund Hall, instructor in architecture Lisa Haber-Thomson is looking over a 3-D rendering of a tall and skinny apartment complex comprised of bright red, off-kilter stacked cubes and extremely steep staircases. "Walk us through it," Haber-Thomsen says to her student. "Do a check with yourself to make sure the circulation isn't awkward. Imagine entering this room, and how you'd move through that space."

Haber-Thomsen's class is seated around the big table in the middle of the classroom shared by the College's two architecture studio courses. Every surface is covered with materials: scraps of museum board and cardstock, partially built models, box-cutters and rulers. The room contains four televisions, a projector screen, cables strung this way and that along the ceiling, numerous rolling whiteboards with orange and green markers only, rolling tables and rolling chairs. Everything here rolls.

The two courses—Haber-Thomsen's "Connections," and "Transformations," taught by assistant professor of architecture Megan Panzano—aim to give ar-

Illustration by Mark Steele

# Yesterday's News

From the pages of the Harvard Alumni Bulletin and Harvard Magazine

1923 The Bulletin notes, without comment, a report in The Harvard Crimson that the Ku Klux Klan has an organization at Harvard, and the first step toward a Harvard branch was taken two years earlier.

**1938** The Graduate School of Public Administration (forerunner of the Kennedy School) opens its first regular session with 15 students, 10 of them veterans of federal government service.

1953 Harvard's new president, Nathan Marsh Pusey, has visited football practice twice during his walks around the University, part of a self-imposed refresher course during which, he says, he is "finding things I did not know existed."

1963 The 1962-63 Treasurer's Report indicates that Harvard's expenses, for the first time, approximate \$100 million.

Bursar's cards are replaced

by plastic student

identification

cards, in

part to speed up operations at Widener Library's circulation desk.

1968 The University Barbershop on the corner of Mass. Ave. and Plympton Street has closed after more than 80 years of service. Co-owner Allen Moloney, son of the founder, laments that most Harvardians are shunning the shears in favor of more substantial decoration for the gray matter below.

1973 A gift from the Andrew H. Mellon Foundation establishes Harvard's first professorship in African history; Kenneth O. Dike is named the first incumbent.

978 President Bok announces that the CIA has chosen to ignore a request that all government agencies reveal any contracts, covert operations, and consulting agreements with Harvard personnel. University guidelines urge community members to avoid participation in intel-

ligence operations.

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### JOHN HARVARD'S JOURNAL





"Transformations" are both organized around frequent critique sessions, familiarizing students with the culture of discussing projects in a design-studio setting.

chitectural-studies concentrators their sea legs so they can hold their own in the GSD's graduate-level courses. The architecturalstudies track, a subfield within the history of art and architecture concentration, was born in 2012; Haber-Thomsen and Panzano view the program's infancy as a strength. Rather than wrestle with a deep-seated pedagogical tradition, they can reassess at every turn how design thinking can cater to College students, and how the track can cater to the contemporary field of architecture. Their classroom can be a laboratory for testing how liberal-arts education can inform architectural-design practices, and how design thinking in turn can seep into humanistic discourse.

The track's predecessor was the department of architectural sciences, born in 1939. Pedagogically, it gravitated around the ideas of the luminary at its center, Walter Gropius, attempting to replicate his famous Bauhaus course, "Basic Design." Students attended lectures and built models out of clay and wire. The department had a reputation for rigorous pre-professionalism, built "essentially for men planning to go to some architectural graduate school," as The Crimson put it in 1951. In 1968, it merged with the fledgling visual-studies program to form the current department of visual and environmental studies (VES); architecture offerings were eventually discontinued.

Today, the re-born program is wedged between the College and the GSD: institutionally affiliated with the Faculty of Arts and Sciences, but housed at the GSD and taught by GSD faculty (see "Architecture as Liberal Art," January-February 2015, page 22). "Transformations" and "Connec-

tions" are the only practice-based offerings directed at undergraduates, and like most studio courses in VES, are oversubscribed: this spring 38 students applied for 12 spots in "Transformations."

Sean Henry Henson '19, who took the course this past spring, tells me the studios are difficult because students simply don't know at first how to make the materials do what they want: there are lots of late nights cutting chipboard all wrong and fumbling one's way through unfamiliar software. Material technologies are always changing, and with them, the limitations on what can be represented and what can be built. These courses are ambitious, expecting students to master the techniques of manipulating museum board, Plexiglas, and cardstock, wood, and chipboard, but also software for 3-D modeling and fabrication, including AutoCAD, Rhino, and the Adobe Suite. None-

A topographical "map of the aquatic floor," designed by Greta Wong '18, who took the "Connections" studio in 2017

theless, undergraduates don't need any prior skills to apply or enroll, and around half the studios' students concentrate in other fields.

"CONNECTIONS" and "Transformations" have opposite trajectories. The former begins with an assignment that asks students to consider the urban landscape from the point of view of a non-human agent, like a bird or a brick. The scope of each project shrinks, from a city to a single lot. For the final project, each student selects a site in Harvard Square to transform. A large plywood model covers four or five tables pushed together in the middle of the room. It's a bird's-eye view of the Square, stretching from the Charles River north to the top edge of the Yard. Everyone's lazily resting their laptops on the outskirts. One student proposes an architectural intervention for the present site of one of the final clubs. Haber-Thomsen wants her to get a better sense of the site: "Can you get into the Fly, or whatever this is?" she asks, gesturing at what is actually the Fox Club.

In her critique, Haber-Thomsen emphasizes the importance of the material expression of an idea: the materials used should reflect the flavor of what the project is trying to achieve. Her advice and attention, as she reviews projects, migrate back and forth between the idea's form and its content. "Maybe there's a way to start drawing your plans so that the void gets treated differently from everything else," she says to a student working on a residential building, open to the Cambridge public, with a large atrium-like opening in the middle. She then suggests deliberately configuring the house's communal spaces so they foster interactions between residents and visitors:



All images courtesy of Megan Panzano

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placing a couch in relation to a stairwell to facilitate conversation, or placing a gallery on the top floor to encourage people to climb all the way to the top of the space.

Conversely, "Transformations" starts with individual raw materials and their capacities for architectural expression, building up to "occupiable scale." In the first assignment, students get eight pieces of paper and eight gerunds, like *laminating, folding, perforating, packing, interlocking*. The goal is to manipulate each piece of two-dimensional paper into a three-dimensional form that incarnates each term. During a critique session, the class pores over the pile of more than 100 pieces of distended paper, discussing what the models are doing to the space they occupy and how they are doing it. For the sec-

### A series of paper models made in the "Transformations" studio

ond project, they zero in on a particular attribute, like the shape of a particular fold, a means of connection, or a pattern of inversion, and translate that into Plexiglas. They make a couple of models, working through this single idea again and again, trying to distort and amplify this single characteristic to see how it resonates with this new rigid and transparent material. What can you express better in Plexiglas, and what gets lost in translation?

Finally, the assignments move out of abstract space and into the real world. For the final project, each student puts a design intervention on the same site: this semester, it was Franklin Street Park, near Mather



House. Henson and his classmates began by close-reading and mapping the site. Students chose to map peculiar qualities, such as the sound levels in different parts of the park,

# News Briefs

## Mending the Medical School

HARVARD MEDICAL SCHOOL (HMS) has sold a 99-year leasehold in eight of the 11 floors of its Harvard Institutes of Medicine building. The decision to sell the interest in 190,000-plus square feet of lab space (News Briefs, March-April, page 23) proved rewarding: Intercontinental Real Estate Corporation paid \$272.5 million, apparently a record price per square foot for Longwood properties.

The use of the funds has not been specified; the school runs at a deficit, and has been trimming costs, boosting continuing-education revenues, and so on. In a statement, CFO Michael White said, "The proceeds from this sale will be used as an investment in our educational and research missions as well as to reduce the school's debt"—suggesting an allocation between augmenting its endowment (\$4.1 billion as of mid 2017) and retiring obligations associated with projects such as the New Research Building (completed at a cost of \$260 million in 2003; "A Scientific Instrument," November-December 2003, page 56). Given its needs and hopes for further growth, it would not be surprising to see HMS continue vigorous fundraising—beyond the \$773 million raised, as of May 31, during the current capital campaign.

## Goldman, Getty, Kluge: A Busy Post-Presidency

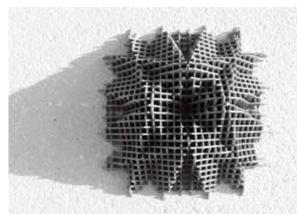
As SHE PREPARED to depart Mass Hall on June 30, President Drew Faust said she looked forward to a relaxing summer and fall on Cape Cod, some time to consider offers for future engagements, and a reimmersion in historical research. Some of her plans gelled quickly.

Effective July 2, she accepted appointment as a director of Goldman Sachs Group Inc. Its chairman and CEO, Lloyd C. Blankfein '75, J.D. '78, who steps down in September, no doubt knows the new board member well: he was deeply involved in the Faculty of Arts and Sciences' capital campaign, particularly in raising funds for financial aid. The announcement occasioned

some wry reflections. The student humorists at Satire V, who had gone dormant for the summer, posted twice (a headline read, "I Understand People Are Upset, but If It Helps I Will Be Making a Lot of Money," and, quoting a mock memo from the former president that plays off undergraduates' continuing interest in finance, "I'll see you in a year or two when I'm your boss again"). Others pointed to her extended discussion, in her 2008 baccalaureate address and other occasions, about students' concerns about the flood of their peers into finance and consulting: "I think you are worried because you want your lives not just to be conventionally successful, but to be meaningful, and you are not sure how those two goals fit together. You are not sure if a generous starting salary at a prestigious brand name organization together with the promise of future wealth will feed your soul." Faust had set a precedent for a sitting Harvard president when she joined the board of Staples Inc. in 2012 (see harvardmag.com/dgf-staples-12).

On July 10, the J. Paul Getty Trust announced that Faust would join its board of trustees—the parent to the eponymous museum, research institute, conservation institute, and foundation. Fellow trustees include James Cuno, president and CEO, who was the director of the then-Harvard University Art Museums from 1991 to 2003; Frances D. Fergusson, president emerita of Vassar and a past president of Harvard's Board of Overseers; and Neil L. Rudenstine, vice chair and himself president emeritus of the University.

Separately, the Library of Congress announced on June 12 that Faust would receive the John W. Kluge Prize for Achievement in the Study of Humanity on September 12, in recognition of her scholarship on the American South and the Civil War. Past winners include philosopher Jürgen Habermas, LL.D. '01; His Excellency Fernando Henrique Cardoso, LL.D. '16, a sociologist and two-term president of Brazil; Peter Brown, LL.D. '02, a muchhonored historian of late antiquity and early Christendom; and one of Faust's own mentors, John Hope Franklin, Ph.D. '41, LL.D. '81, the pioneering historian of race in America. A s1-million honorarium accompanies the prize.



or where in the park you could be seen from outside it. Then they intervened in some way to highlight or deemphasize the chosen element, whether by adding a physical structure or manipulating the elevation or making it more kid-friendly, or, in one case, by setting up boundaries between the zones frequented by human and canine visitors. Panzano then assesses how each student's intervention choreographs an agent's movement through the space. How does it encourage that agent to perceive the site differently, making its hidden qualities manifest?

BOTH COURSES are organized around frequent critiques. At one of Panzano's, she describes the students' projects in a hyper-articulate idiom of architectural rhetoric, dense with inscrutable but delicious phrases like "typological models of space," "element of twoness," and "memory of the plane." You can produce "the perception of a curve through the accretion of sharp lines." She discusses "open systems that can be reoriented." For one model she recommends "the introduction of material difference." "You've produced hidden space!" she exclaims at one point, and then explains: if you mismatch an agent's experience and reality, she says, you acquire the capacity to make space disappear.

As an outsider it's hard for me to wrestle the words into meaning anything at all, but the rest of the class nods along and chimes in. They no longer need the training wheels of constant definitions. Panzano explains some of the terminology: a "datum" is a horizonlike line that tells you where a horizontal plane meets vertical ones. "Node," meanwhile, is an example of a term that has "a particular definition in the world at large," but "takes on a new meaning when applied to space." A node, in architecture, is a point of change, a moment of difference, a "space of centrality," an organizer, the place and time

#### A "Transformations" model made from opaque board, exploring the concept of "intensities" through repeated, intersecting patterns

"where things come together." One hears the term "attenuation," a lot as well; it describes the "change from something that is dense to something that is less dense." "We use a lot of terms to describe change and transition," Panzano says.

Henson tells me that at first terms like "interdigitization" were incomprehensible, but he and his classmates learned to understand quickly. They also learned how to speak. Certain terms are taboo: they prefer,

for example, not to use "building" to describe student projects. It's too restrictive, implying human scale and habitability. Panzano prefers "intervention" or "assembly," terms that defamiliarize our relationship to the urban landscape and start to dismantle clichés about architecture.

## A Time of Trauma

"OVER these past few years, I have felt increasingly that something is terribly wrong—and this year ever so much more than last," said professor of biology George Wald, who shared the 1967 Nobel Prize in physiology or medicine. "But I think I know what's the matter. I think that this whole generation of students is beset with a profound uneasiness, and I don't think that they have yet quite defined its source."

His speech, at an antiwar teach-in at MIT in March 1969, captured the spirit of a troubled time—an era that culminated in unprecedented upheaval on campus, and is now being recalled in the second of two fiftieth-anniversary exhibitions at Harvard University Archives.

The sources of that "uneasiness," of course, were numerous, in a nation and on campuses polarized by the Vietnam War, political violence, riots that decimated American cities, and the radicalizing, televised con-

Students at the Graduate School of Design created the lion's share of posters used by student activists in 1969. sider would never notice. In some ways the studios are really language courses: they initiate students into the design community's lexicon, and they teach them to translate paper into Plexiglas, code into cardboard, thought into matter. These courses are not about learning to fill up cities with livable or workable infrastructure: rather, they are rigorous training in how to think about space by handling

Equipped with this new vocabulary, the

students can pick up on and articulate ele-

ments of each other's projects that an out-

structure: rather, they are rigorous training in how to think about space by handling materials, how to think *through* making. No other courses at Harvard transform your experience of space like these studios, a student tells me. Henson, too, feels he came out of "Transformations" with a new sensitivity to elements of the built environment around him, acutely aware of how designers manipulate the way he moves through the world. ~LILY SCHERLIS

frontation between protestors and the Chicago police and National Guardsmen on the streets during the Democratic National Convention in late August 1968. A fiftieth-reunion exhibition at the archives last spring brought back to life the experiences of the class of 1968. As seniors, they voted to host Martin Luther King Jr. as their class day speaker; after his assassination, his widow, Coretta Scott King, agreed to speak in his place—and arrived on campus a few days after the assassination of Robert F. Kennedy '48. That spring, black students had demanded changes in admissions, the curriculum, and faculty hiring; and hundreds of students indicated that they would not serve if called to military duty. But the campus itself had not yet been torn asunder, as

Columbia's was that spring.

"We got really interested in doing this exhibition when we started doing one on 1968, and we realized that with the events of 1968, the world starts to change, and it continues to change into 1969," said University archivist Megan Sniffin-Marinoff (Harward Portrait, Janu-Hary-February, page 16).

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